

## Drainage Water Management

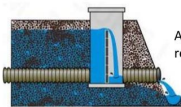
Drainage Water Management is the process of managing the timing and the amount of water discharged from agricultural drainage systems. DWM is based on the premise that the same drainage intensity is not required at all times during the year. With DWM, both water quality improvement and production benefits are possible. Water quality benefits are derived by minimizing unnecessary tile drainage and may reduce the amount of nitrate that leaves farm fields. DWM systems can also retain water in fields that can be used for crop production later in the season when needed.

Grant funds are available for landowners to work with private consultants to develop drainage water management plans, with an emphasis on Controlled Drainage and Bioreactors.

## Why Use Drainage Water Management?

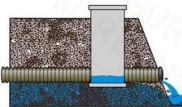


Drainage water management helps to control the amount and timing of water leaving agricultural fields through tile lines.



After harvest, farmers can add riser boards to retain water and limit nutrient runoff.

Before planting or harvest, farmers can remove riser boards to ensure that the soil is dry enough.



Illustrations courtesy of Jane Frankenberger.



*"To assist the landowners of Nicollet County in efficiently and effectively using natural resources in order to increase the productive use of cropland, pastureland, woodland, wild life land, urban land and recreation land, while maintaining and improving the soils base, water quality, tree production, wildlife and quality of life in the county."*

**For more information about Project 33 funding opportunities, please contact Eric Miller or Blake Honetschlager with Nicollet SWCD.**

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Information Sources:  
NRCS, <https://www.nrcs.usda.gov>, 2021  
UMN, <https://extension.umn.edu>, 2021

## City of St. Peter Wellhead Protection Area Clean Water Grant Available to Landowners (Project 33 Grant)

- Cost Share Payments for Conservation
- Direct Incentive Payments to Landowners
- Nutrient Management & Spring Applied Nitrogen Incentives
- Water Management & Conservation Drainage
- Cover Crop Incentives
- Structure Installation
- Alternative Intakes

For additional information about Nicollet SWCD, Please Visit  
[www.nicolletswcd.org](http://www.nicolletswcd.org)



Photo - <https://extension.umn.edu>

## Cover Crop Incentive (\$30/acre/yr)

Growing cover crops outside the cash crop season can help improve water quality, reduce erosion and reduce nitrate loss. Cover crops work with early harvested crops like small grain, silage, canning crops, as well as your standard soybean/corn rotations.

### Benefits of Cover Crops:

**Erosion control** - Keeping live plant material above and below ground will reduce soil loss and hold soil structure together.

**Nitrate Reduction** - Living plants take up nitrogen from the soil, preventing nitrate leaching. This retains nitrogen in the field for next years crop, while also reducing groundwater nitrate contamination.

The Project 33 Clean Water Fund Grant provides direct payments to landowners who plant cover crops in the St. Peter Wellhead Protection Area. Payments are set at \$30/acre on a 3 year contract. Please contact Eric Miller for more information about signing up for this incentive.

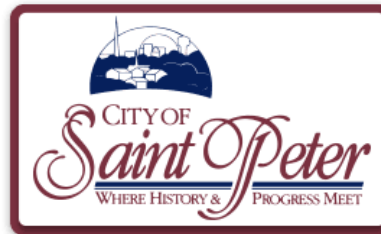
## Nutrient Management

Nutrient management involves managing the amount, placement, and timing of plant nutrients to obtain optimum yields and minimize the risk of surface and groundwater pollution.

Nutrient Management Plans, completed under the Project 33 Clean Water Grant, will receive cost share to cover the cost of using private consultants. Working directly with farm managers, having an emphasis on spring applied nitrogen, Nutrient Management Plans will help reduce nitrogen loss and infiltration in the wellhead protection area.

Landowners in the wellhead protection area are also eligible to receive direct payments for including spring applied nitrogen in their farm operation. **Incentive payments are set at \$26.25/acre, per application year.** Applying nitrogen closer to the time at which the plant needs it, allows for more nutrient uptake by the plant, with less leaching and denitrification loss.

### Funding Provided by:



In 2008, Minnesota's voters passed the Clean Water, Land and Legacy Amendment (Legacy Amendment) to the Minnesota Constitution to: protect drinking water sources; to protect, enhance, and restore wetlands, prairies, forests, and fish, game, and wildlife habitat; to preserve arts and cultural heritage; to support parks and trails; and to protect, enhance, and restore lakes, rivers, streams, and groundwater.

## Water & Sediment Control Basin (WASCOB)

A water and sediment control basin, (WASCOB), is an earth embankment or a combination ridge and channel constructed across the slope of minor watercourses to form a sediment trap and water detention basin with a stable outlet.

WASCOB structures store water runoff from storm events, slowing flow rates, reducing runoff quantities and reducing flood potential. Once collected, water is slowly released through a tile intake (24hr storage time) or through soil infiltration.

### Benefits of Water & Sediment Control Basins:

**Water Storage** - Earth embankments store water for short periods of time, allowing sedimentation to drop out, reducing soil loss and nutrient loss from your field.

**Gully Prevention** - WASCOB structures prevent gully erosion from advancing, and provide you with a stable outlet for both surface water and tile drainage.

**Stormwater Management** - Holding water on the land, even for short periods of time, will reduce down flow impacts to resources. This will allow better management of water flowing into the St. Peter Wellhead Protection Area.

The Project 33 Clean Water Fund Grant provides cost share payments to landowners for constructing WASCOB structures in the St. Peter Wellhead Protection area.



Photo - Nicollet SWCD